

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1.-2. (Canceled)

¹/₂. (Currently Amended) An isolated cancer peptide consisting of (a) (i) amino acids 53-62 of SEQ ID NO: 4, (ii) amino acids 127-136 of SEQ ID NO: 4, or (iii) a functionally equivalent variant of (i), wherein the functionally equivalent variant has at least 90% sequence identity with amino acids 53-62 of SEQ ID NO: 4, (iv) amino acids 52-62 of SEQ ID NO: 4, (v) amino acids 51-62 of SEQ ID NO: 4, (vi) amino acids 50-62 of SEQ ID NO: 4, (vii) amino acids 49-62 of SEQ ID NO: 4, or (viii) amino acids 48-62 of SEQ ID NO: 4, and (b) optionally 1 to about 10 additional contiguous amino acids of SEQ ID NO: 4 at the N-terminus of the cancer peptide, wherein said cancer peptide or functionally equivalent variant stimulates cancer antigen specific cytotoxic T lymphocytes.

4. (Canceled)

¹/₂. (Previously Presented) The isolated cancer peptide of claim ¹/₂, wherein the cytotoxic T lymphocytes are restricted by a Major Histocompatibility Complex (MHC) molecule.

³/₂. (Previously Presented) The isolated cancer peptide of claim ²/₂, wherein the MHC molecule is an MHC class I molecule.

⁴/₂. (Currently Amended) The isolated cancer peptide of claim ¹/₂, wherein the cancer peptide is ~~derived from~~ expressed by a cell of a cancer selected from the group consisting of: a non-Hodgkins lymphoma, leukemia, Hodgkins lymphoma, lung cancer, liver cancer, metastases, melanoma, adenocarcinoma, thymoma, colon cancer, uterine cancer, breast cancer, prostate cancer, ovarian cancer, cervical cancer, bladder cancer, kidney cancer, pancreatic cancer and sarcoma.

⁵/₂. (Currently Amended) The isolated cancer peptide of claim ⁴/₃, wherein the isolated cancer peptide is presented by a primary breast tumor cell or by a melanoma cell.

9. (Canceled)

~~6~~¹₁₀. (Previously Presented) The isolated cancer peptide of claim ~~1~~¹, wherein the isolated cancer peptide consists of amino acids 53-62 of SEQ ID NO: 4.

11.-13. (Canceled)

~~7~~¹₁₄. (Previously Presented) The isolated cancer peptide of claim ~~1~~¹, wherein the isolated cancer peptide consists of amino acids 48-62 of SEQ ID NO: 4.

15.-25. (Canceled)

~~8~~¹₂₆. (Currently Amended) A composition comprising the cancer peptide of claim ~~1~~¹ ~~an isolated cancer peptide consisting of (a) (i) amino acids 53-62 of SEQ ID NO: 4, (ii) amino acids 127-136 of SEQ ID NO: 4, or (iii) a functionally equivalent variant of (i), wherein the functionally equivalent variant has at least 90% sequence identity with amino acids 53-62 of SEQ ID NO: 4, and (b) optionally 1 to about 10 additional contiguous amino acids of SEQ ID NO: 4 at the N-terminus of the cancer peptide, wherein said cancer peptide or functionally equivalent variant stimulates cancer antigen specific cytotoxic T lymphocytes.~~

27. (Canceled)

~~8~~⁹₂₆. (Previously Presented) An immunogen comprising the composition of claim ~~26~~⁹ alone or in combination with at least one immunostimulatory molecule, wherein the immunogen elicits a response by an antigen specific T lymphocyte.

~~10~~⁹₂₉. (Previously Presented) The immunogen of claim ~~28~~⁹, wherein the immunostimulatory molecule is an MHC molecule.

30.-66. (Canceled)

~~11~~³₆₇. (Previously Presented) The isolated cancer peptide of claim ~~3~~³, wherein the MHC class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

¹²/₆₈. (Previously Presented) The isolated cancer peptide of claim ¹¹/₆₇, wherein the MHC class I molecule is HLA-A31.

¹³/₆₉. (Currently Amended) The isolated cancer peptide of claim ¹/₇, wherein the ~~isolated cancer peptide~~ functionally equivalent variant consists of amino acids 53-62 of SEQ ID NO: 4 except that amino acid 54 of SEQ ID NO: 4 is substituted with a different amino acid.

¹⁴/₇₀. (Previously Presented) The isolated cancer peptide of claim ¹³/₆₉, wherein the different amino acid is threonine.

¹⁵/₇₁. (Previously Presented) The isolated cancer peptide of claim ¹³/₆₉, wherein the different amino acid is selected from the group consisting of alanine, isoleucine, valine, and leucine.

¹⁶/₇₂. (Currently Amended) The isolated cancer peptide of claim ¹/₇, wherein the functionally equivalent variant ~~isolated cancer peptide~~ consists of amino acids 53 54-62 of SEQ ID NO: 4 except that amino acid 53 of SEQ ID NO: 4 is substituted with a different amino acid and an additional amino acid at the N-terminus of the cancer peptide.

¹⁷/₇₃. (Currently Amended) The isolated cancer peptide of claim ¹⁶/₇₂, wherein the ~~additional~~ different amino acid is valine or threonine.

¹⁸/₇₄. (Previously Presented) The isolated cancer peptide of claim ¹/₇, wherein the isolated cancer peptide consists of amino acids 52-62 of SEQ ID NO: 4.

¹⁹/₇₅. (Previously Presented) The isolated cancer peptide of claim ¹/₇, wherein the isolated cancer peptide consists of amino acids 51-62 of SEQ ID NO: 4.

²⁰/₇₆. (Previously Presented) The isolated cancer peptide of claim ¹/₇, wherein the isolated cancer peptide consists of amino acids 50-62 of SEQ ID NO: 4.

²¹/₇₇. (Previously Presented) The isolated cancer peptide of claim ¹/₇, wherein the isolated cancer peptide consists of amino acids 49-62 of SEQ ID NO: 4.

78.-82. (Canceled)

²²
~~83~~. (Previously Presented) The immunogen of claim ¹⁰~~29~~, wherein the MHC molecule is a MHC Class I molecule.

²³
~~84~~. (Previously Presented) The immunogen of claim ²³~~83~~, wherein the MHC Class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

²⁴
~~85~~. (Currently Amended) The immunogen of claim ²³~~84~~ ~~83~~, wherein the MHC Class I molecule is HLA-A31.

~~86~~. (Canceled)

²⁵
~~87~~. (Currently Amended) The isolated cancer peptide of claim ¹~~2~~, wherein the cancer peptide is ~~about~~ 10 amino acids in length.

²⁶
~~88~~. (Previously Presented) An isolated cancer peptide consisting of a portion of SEQ ID NO: 4, wherein the portion consists of (i) amino acids 55-62 of SEQ ID NO: 4; (ii) amino acids 127-136 of SEQ ID NO: 4; (iii) amino acids 53-62 of SEQ ID NO: 4; ~~(iv) amino acids 54-62 of SEQ ID NO: 4;~~ ^(v) ~~(v)~~ amino acids 48-62 of SEQ ID NO: 4; ^(vi) ~~(vi)~~ amino acids 43-62 of SEQ ID NO: 4; ^(vii) ~~(vii)~~ amino acids 52-62 of SEQ ID NO: 4; ^(viii) ~~(viii)~~ amino acids 51-62 of SEQ ID NO: 4; ^(ix) ~~(ix)~~ amino acids 50-62 of SEQ ID NO: 4; ^(x) ~~(x)~~ amino acids 49-62 of SEQ ID NO: 4; ^(xi) ~~(xi)~~ amino acids 53-62 of SEQ ID NO: 4 in which amino acid 54 is substituted with a different amino acid; or ^(xii) ~~(xii)~~ amino acids 54-62 of SEQ ID NO: 4 and an additional amino acid at the N-terminus of amino acids 54-62; wherein said cancer peptide is immunologically recognized by antigen specific cytotoxic T lymphocytes, wherein the antigen is an epitope of a protein having the amino acid sequence of SEQ ID NO: 4.

²⁷
~~89~~. (Previously Presented) The isolated cancer peptide of claim ²⁶~~88~~, wherein the different amino acid is threonine.

²⁸
~~90~~. (Previously Presented) The isolated cancer peptide of claim ²⁶~~88~~, wherein the different amino acid is alanine, isoleucine, valine, or leucine.

²⁹
~~91~~. (Previously Presented) The isolated cancer peptide of claim ²⁶~~88~~, wherein the additional amino acid is valine or threonine.

³⁰/₉₂. (Previously Presented) The isolated cancer peptide of claim ²⁶/₈₈, wherein the cytotoxic T lymphocytes are restricted by an MHC molecule.

³¹/₉₃. (Previously Presented) The isolated cancer peptide of claim ³⁰/₉₂, wherein the MHC molecule is an MHC class I molecule.

³²/₉₄. (Previously Presented) The isolated cancer peptide of claim ³¹/₉₃, wherein the MHC class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

³³/₉₅. (Previously Presented) The isolated cancer peptide of claim ³²/₉₄, wherein the MHC class I molecule is HLA-A31.

³⁴/₉₆. (Currently Amended) The isolated cancer peptide of claim ²⁶/₈₈, wherein the cancer peptide is ~~derived from~~ expressed by a cell of a cancer selected from the group consisting of a non-Hodgkins lymphoma, leukemia, Hodgkins lymphoma, lung cancer, liver cancer, metastases, melanoma, adenocarcinoma, thymoma, colon cancer, uterine cancer, breast cancer, prostate cancer, ovarian cancer, cervical cancer, bladder cancer, kidney cancer, pancreatic cancer and sarcoma.

³⁵/₉₇. (Currently Amended) The isolated cancer peptide of claim ³⁴/₉₆ 88, wherein the isolated cancer peptide is presented by a primary breast tumor cell or by a melanoma cell.

³⁶/₉₈. (Previously Presented) A composition comprising one or more of the isolated cancer peptides of claim ²⁶/₈₈.

³⁷/₉₉. (Previously Presented) An immunogen comprising one or more of the isolated cancer peptides of claim ²⁶/₈₈, alone or in combination with at least one immunostimulatory molecule, wherein the immunogen elicits a response by an antigen specific T lymphocyte.

³⁸/₁₀₀. (Previously Presented) The immunogen of claim ³⁷/₉₉, wherein the immunostimulatory molecule is an MHC molecule.

³⁹/₁₀₁. (Previously Presented) The immunogen of claim ³⁸/₁₀₀, wherein the MHC molecule is an MHC Class I molecule.

⁴⁰
~~102~~. (Previously Presented) The immunogen of claim ³⁹~~101~~, wherein the MHC Class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

⁴¹
~~103~~. (Previously Presented) The immunogen of claim ⁴⁰~~102~~, wherein the MHC Class I molecule is HLA-A31.